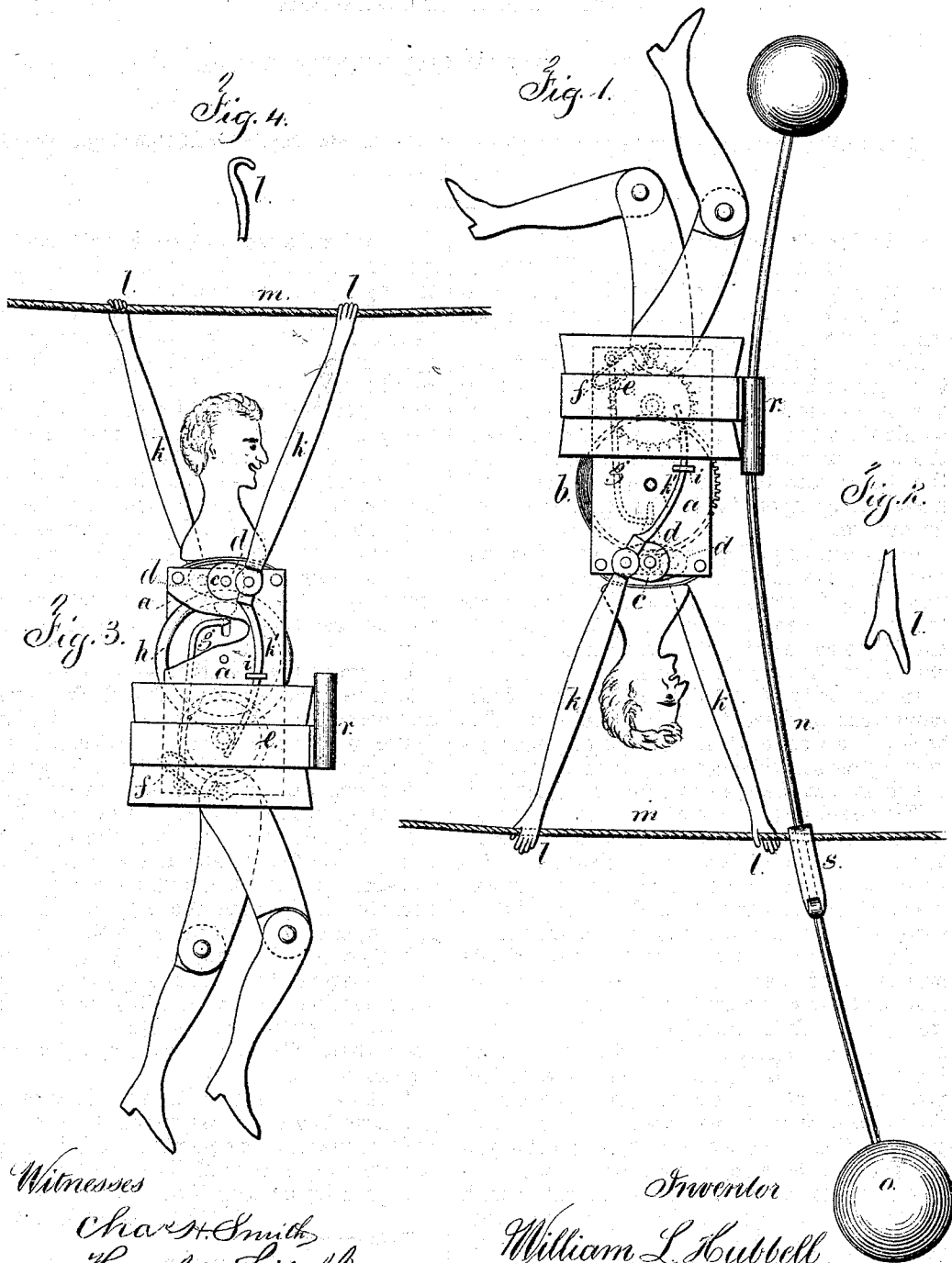


W. L. HUBBELL.
AUTOMATIC TOY.

No. 182,194.

Patented Sept. 12, 1876.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM L. HUBBELL, OF NEW YORK, N. Y., ASSIGNOR TO RAYMOND JENKINS, OF SAME PLACE.

IMPROVEMENT IN AUTOMATIC TOYS.

Specification forming part of Letters Patent No. 152,194, dated September 12, 1876; application filed May 29, 1876.

To all whom it may concern:

Be it known that I, WILLIAM L. HUBBELL, of the city and State of New York, have invented an Improvement in Toy Gymnasts, of which the following is a specification:

The object of this invention is to give to the toy figure a hand-over-hand movement along a rope or cord. The means employed are available when the figure is hanging below the cord, or when a balancing-weight is used the figure may be above the cord, and will move along upon its hands with the head downward.

In the drawing, Figure 1 is an elevation representing the toy figure in an inverted position. Fig. 2 shows the shape of the hands for the figure when so used. Fig. 3 represents the figure as hanging from a cord, and Fig. 4 shows the hands of the same.

In the body of the figure there is a clock-movement between the side plates *a a*. The spring *b* is wound up, as usual, and gives a revolving motion through a train of gearing to the shaft *c*, at the ends of which are cranks *d*.

The speed of the movement is regulated by an escapement-wheel, *e*, pallets *f*, and a lever, *g*, the end of which is within a slot in the balance-wheel vibrator *h* that insures a full movement of the pallets in each direction, and insures substantial uniformity of movement.

The arms *k k* are extended beyond the cranks *d*, and the inner ends *k'* slide in guides *i*, so that the movement of the arm received from the crank is that of a lever of the second order, with the guide *i* as the fulcrum; hence the hands *l* of the figure move in an elliptical path, and by placing the cranks *d* at one hundred and eighty degrees apart the movement given to the hands is similar to those of a person going along a rope hand over hand.

When the hands are made hooked or with the fingers bent, as seen in Fig. 4, the figure will hang from the cord *m*, and move along the same by a hand-over-hand motion so long as the clock-work continues to be operative.

If the hands are made open, with the thumb spread, as seen in Fig. 2, the figure is adapted to moving along above the cord; but in that case the rod *n* and balancing-weight *o* must be used. Said rod is attached to the waist-band socket *r*, and is of such a length and weight that the figure will be held in an upright position above the cord as it moves along by a hand-over-hand movement with the head downward. There should be a long spring-loop, *s*, upon one side of the rod *n*, through which the cord passes, and this forms a guide to cause the figure to remain in the proper position relatively to the cord.

This toy gymnast is adapted to afford amusement to children and others, and the hand-motions correspond very closely to those of a man.

I claim as my invention—

1. The combination, with a clock-movement and actuating-crank, of the arms *k* of a toy figure, with the inner ends *k'* extended to form guide-levers, the guides *i* for the same, and the hands that are hooked or made with the fingers bent, substantially as set forth.

2. The combination, with the clock-movement, a toy figure, and a balance-weight, of the arms guided at *i*, and moved by cranks, and the hands with the fingers and thumbs spread, substantially as set forth.

3. The combination, with a toy figure, of arms operated by cranks to give a hand-over-hand motion, and a clock-movement having an escapement-wheel, pallets, and a balance-wheel vibrator, *h*, substantially as and for the purposes set forth.

4. As a new article of manufacture, a toy gymnast, having hands, to which a hand-over-hand movement is communicated by a spring and gearing, substantially as set forth.

Signed by me this 25th day of May, 1876.

WM. L. HUBBELL.

Witnesses:

GEO. T. PINCKNEY,
CHAS. H. SMITH.